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Reliable Replacement Warhead (RRW)

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RRW Priorities – Draft Military Characteristics



- Nuclear Safety
- Nuclear Security
- Certifiability
- Cost
- Manufacturing
- Reliability
- Survivability
- Yield
- Longevity

BENEFITS OF RRW

STOCKPILE	<ul style="list-style-type: none">• SUSTAINABLE• IMPROVED CONFIDENCE• SMALLER RESERVE STOCKPILE
NUCLEAR ENTERPRISE	<ul style="list-style-type: none">• GREATER COST EFFECTIVENESS• INVIGORATED DESIGN & ENGINEERING CAPABILITY• GREATER DISMANTLEMENT CAPACITY
DEFENSE POLICY	<ul style="list-style-type: none">• MORE-EFFECTIVE ASSURANCE OF ALLIES• MORE-EFFECTIVE DISSUASION AND DETERRENCE OF POTENTIAL ADVERSARIES
ARMS CONTROL	<ul style="list-style-type: none">• REDUCED LIKELIHOOD OF NUCLEAR TESTING• GREATER REDUCTIONS IN TOTAL STOCKPILE

Key Drivers for RRW

- **Certification without underground testing**

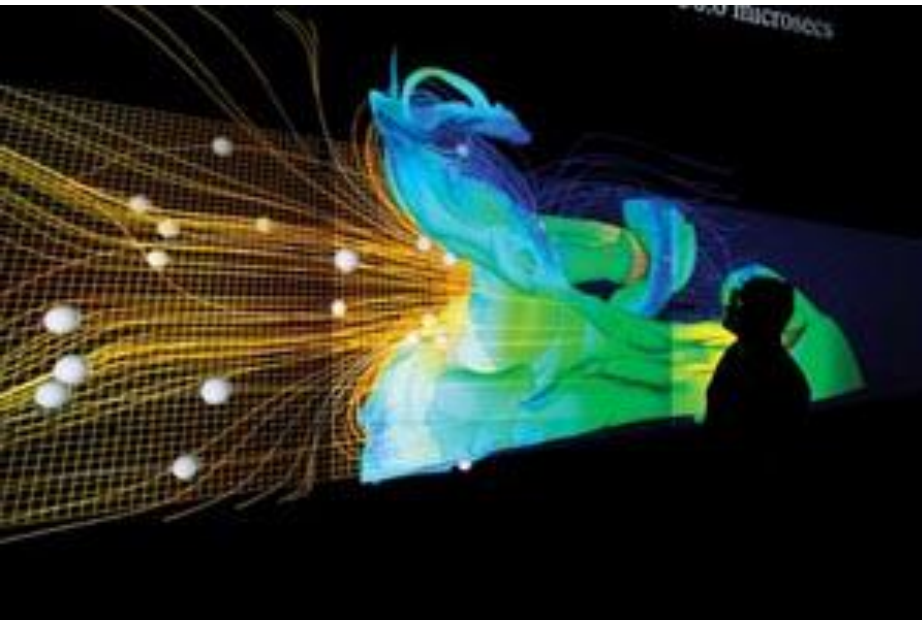
- Allows significant improvements in nuclear safety and security

- Provides an enabler for transformation of the stockpile and complex

RRW assures the long-term reliability, safety, and security of the stockpile

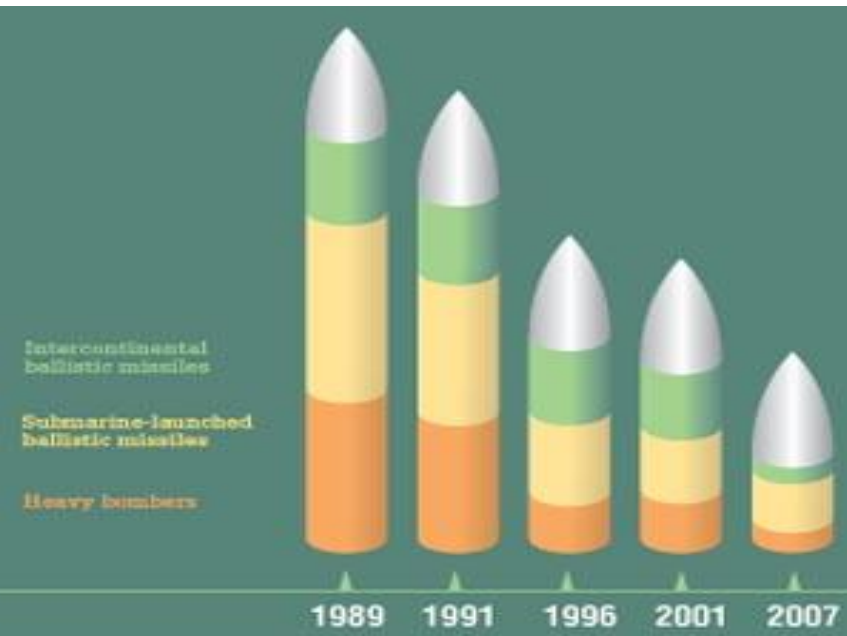


Los Alamos nuclear weapons testing

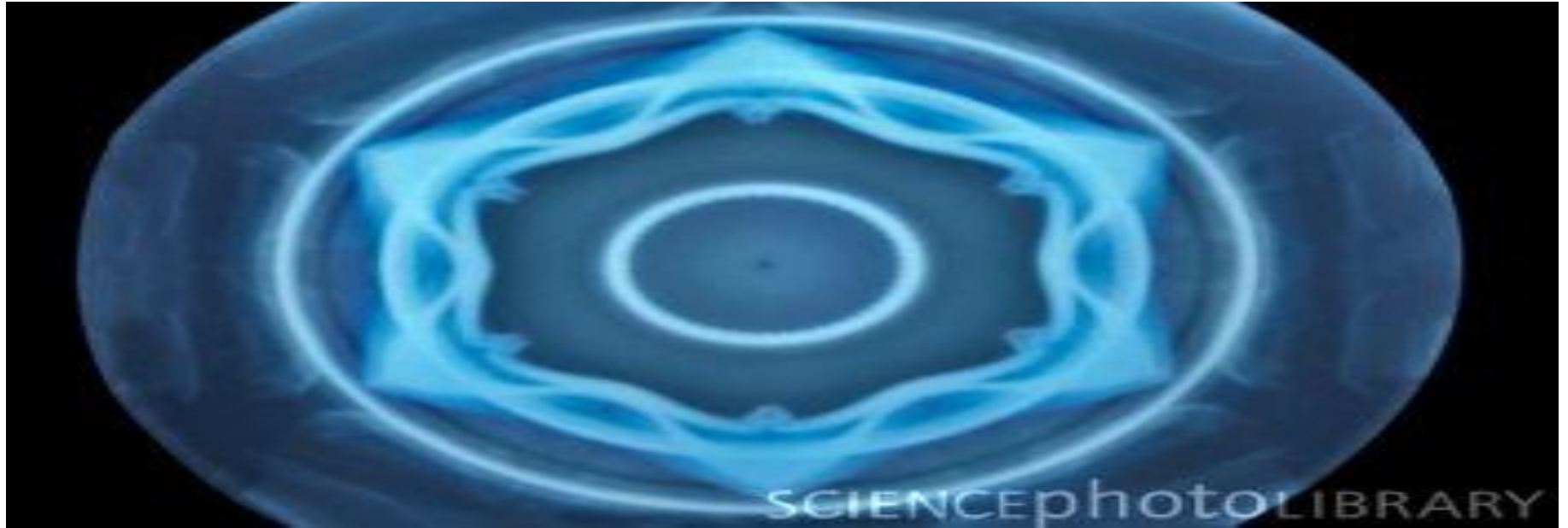


Realistic 3-D visualizations of computer calculations enable Los Alamos weapons designers to predict weapons performance without nuclear testing. In the complicated flow pattern shown above, the golden mesh and *Weaver*.
Photo by Presley Salaz.

Hundreds of wire pins extending from the central yellow pin dome are designed to generate signals upon contact with a moving surface. Those signals are used to track the implosion of material as it
Photo by Mark Hoverson, HX-3



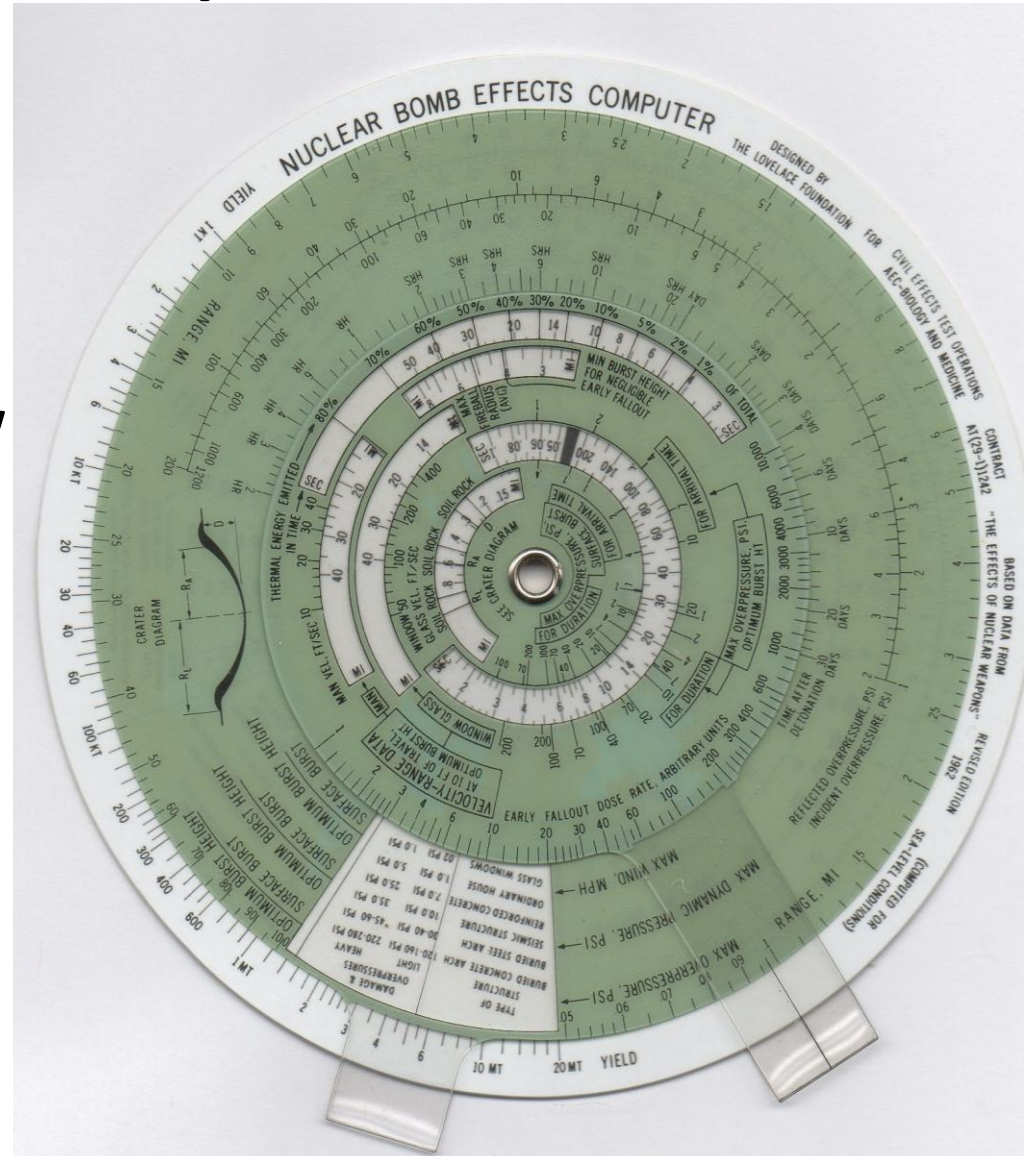
AIRIX nuclear weapons testing



Summary

RRW – A Safe and Secure Replacement Warhead

- The historical trend shows that the need for improved safety and security will continue to grow
- It is the combination of new technologies with the opportunity of RRW that allows *significant* advancement in safety and security
- **RRW provides a path to future weapon certification**



THANK YOU

